

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (currently amended): An image processing apparatus comprising:
a command analyzing unit obtaining color information of each endpoint of an object by analyzing a drawing command;
a draw processing unit obtaining the color information of successive scanned points inside the object through incremental interpolation of the color information, thereby successively producing the color information for an entirety of the object; and
an image processing unit processing the color information outputted by the draw processing unit,

wherein the draw processing unit further includes a color information interpolating unit controlling change of color by interpolating color in horizontal and vertical directions in accordance with a mesh, which is shaped as a square surrounding the object and is divided into minimal color lengths in vertical and horizontal directions.

Claim 2 (original): The image processing apparatus as claimed in claim 1, wherein the draw processing unit includes:

a setup unit obtaining differential coefficients of the color information in horizontal and vertical directions of the object, with a plane equation of the object with respect to the color information of each endpoint of the object;

a start point computing unit obtaining X-Y coordinates and the color information of a start point situated on a left or right side of the object and on a given horizontal line by referring to said each end point and the differential coefficients; and

a horizontal color information interpolating unit interpolating color information along the given horizontal line in accordance with the X-Y coordinates and the color information of the start point and the differential coefficients in the horizontal direction.

Claim 3 (original): The image processing apparatus as claimed in claim 2, wherein the setup unit computes respective color information corresponding to said each endpoint in parallel.

Claim 4 (original): The image processing apparatus as claimed in claim 2, wherein the start point computing unit includes:

a vertical X value interpolating unit interpolating an X value in the vertical direction by referring to said each end point; and

a vertical color information interpolating unit interpolating color information in the vertical direction by referring to said each end point.

Claim 5 (original): The image processing apparatus as claimed in claim 2, wherein the horizontal color information interpolating unit interpolates respective color information corresponding to the color information obtained by the start point computing unit, in parallel.

Claim 6 (canceled)

Claim 7 (original): The image processing apparatus as claimed in claim 1, wherein the image processing unit includes a color conversion unit converting color information obtained from the draw processing unit.

Claim 8 (original): The image processing apparatus as claimed in claim 7, wherein the image processing unit includes a halftone unit halftoning the color information converted in the color conversion unit.

Claim 9 (original): The image processing apparatus as claimed in claim 8, wherein the halftone unit includes a fixed length data generation unit converting the halftoned color information into word length for a band data storage unit.

Claim 10 (currently amended): An image processing method comprising the steps of:
a) obtaining color information of each endpoint of an object by analyzing a drawing command;

b) obtaining the color information of successive scanned points inside the object through incremental interpolation of the color information, thereby successively producing the color information for an entirety of the object; and

c) processing the color information outputted in step b),

wherein step b) further includes a step of:

controlling change of color by interpolating color in horizontal and vertical directions in accordance with a mesh, which is shaped as a square surrounding the object and is divided into minimal color lengths in vertical and horizontal directions.

Claim 11 (currently amended): The image processing method as claimed in claim [[1]] 10, wherein step b) includes the steps of:

d) obtaining differential coefficients of the color information in horizontal and vertical directions of the object, with a plane equation of the object with respect to the color information of each endpoint of the object;

e) obtaining X-Y coordinates and the color information of a start point situated on a left or right side of the object and on a given horizontal line by referring to said each end point and the differential coefficients; and

f) ~~interpolating unit~~ interpolating color information along the given horizontal line in accordance with the X-Y coordinates and the color information of the start point and the differential coefficients in the horizontal direction.

Claim 12 (original): The image processing method as claimed in claim 11, wherein respective color information corresponding to said each endpoint is computed in parallel in step d).

Claim 13 (original): The image processing method as claimed in claim 11, wherein step e) includes the steps of:

g) interpolating an X value in the vertical direction by referring to said each end point; and

h) interpolating color information in the vertical direction by referring to said each end point.

Claim 14 (original): The image processing method as claimed in claim 11, wherein respective color information corresponding to the color information obtained in step e), is interpolated in parallel.

Claim 15 (canceled)

Claim 16 (original): The image processing method as claimed in claim 10, wherein step c) includes a step of:

j) converting color information obtained in step b).

Claim 17 (original): The image processing method as claimed in claim 16, wherein step c) includes a step of:

k) halftoning the color information converted in step j).

Claim 18 (original): The image processing method as claimed in claim 17, wherein step k) includes a step of:

l) converting the halftoned color information into word length for a step of storing band data.

Claim 19 (currently amended): An image processing program comprising the functions of:

a) obtaining color information of each endpoint of an object by analyzing a drawing command;

b) obtaining the color information of successive scanned points inside the object through incremental interpolation of the color information, thereby successively producing the color information for an entirety of the object; and

c) processing the color information outputted in function b),

wherein function b) further includes a function of: controlling change of color by interpolating color in horizontal and vertical directions in accordance with a mesh, which is shaped as a square surrounding the object and is divided into minimal color lengths in vertical and horizontal directions.

Claim 20 (currently amended): The image processing program as claimed in claim 19, wherein function b) includes the functions of:

d) obtaining differential coefficients of the color information in horizontal and vertical directions of the object, with a plane equation of the object with respect to the color information of each endpoint of the object;

e) obtaining X-Y coordinates and the color information of a start point situated on a left or right side of the object and on a given horizontal line by referring to said each end point and the differential coefficients; and

f) ~~interpolating unit~~ interpolating color information along the given horizontal line in accordance with the X-Y coordinates and the color information of the start point and the differential coefficients in the horizontal direction.

Claim 21 (original): The image processing program as claimed in claim 20, wherein respective color information corresponding to said each endpoint is computed in parallel in function d).

Claim 22 (original): The image processing program as claimed in claim 20, wherein function e) includes the functions of:

g) interpolating an X value in the vertical direction by referring to said each end point;
and

h) interpolating color information in the vertical direction by referring to said each end point.

Claim 23 (original): The image processing program as claimed in claim 20, wherein respective color information corresponding to the color information obtained in function e), is interpolated in parallel.

Claim 24 (canceled)

Claim 25 (original): The image processing program as claimed in claim 19, wherein function c) includes a function of:

j) converting color information obtained in function b).

Claim 26 (original): The image processing program as claimed in claim 25, wherein function c) includes a function of:

k) halftoning the color information converted in function j).

Claim 27 (original): The image processing program as claimed in claim 26, wherein function k) includes a function of:

l) converting the halftoned color information into word length for a function of storing band data.